

ABSTRACT OF THE DISCLOSURE

A comparator compares a first binary input signal and a second binary input signal each binalized. A generator generates a reset signal at each rising edge or each falling edge of the first input signal. A counter counts the second input signal at each timing determined by the reset signal. The counted value represents a ratio of each frequency of the first input signal and the second input signal. A subtractor calculates a difference between the counted value and a set value representing a predetermined ratio of each frequency of the first input signal and the second input signal. An integrator integrates the difference. The integrated value represents a phase difference of the frequencies of the first input signal and the second input signal.